

Serial Number: 09/515,806A

1/29/2003

Changed a file from non-ASCII to ASCII **ENTERED**

Changed the margins in cases where the sequence text was "wrapped" down to the next line.

Edited a format error in the Current Application Data section, specifically:

Edited the Current Application Data section with the actual current number. The number inputted by the applicant was  the prior application data; or  other \_\_\_\_\_.

Added the mandatory heading and subheadings for "Current Application Data".

Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

Changed the spelling of a mandatory field (the headings or subheadings), specifically:

Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

Inserted colons after headings/subheadings. Headings edited included:

Deleted extra, invalid, headings used by an applicant, specifically:

Deleted:  non-ASCII "garbage" at the beginning/end of files;  secretary initials/filename at end of file;  page numbers throughout text;  other invalid text, such as \_\_\_\_\_.

Inserted mandatory headings, specifically:

Corrected an obvious error in the response, specifically:

Edited identifiers where upper case is used but lower case is required, or vice versa.

Corrected an error in the Number of Sequences field, specifically:

A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

Deleted *ending* stop codon in *amino* acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_

Other:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



1600

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/515,806A

DATE: 01/29/2003

TIME: 08:33:45

Input Set : N:\CrF4\01242003\I515806A.raw  
 Output Set: N:\CRF4\01292003\I515806A.raw

1 <110> APPLICANT: MILLENNIUM PHARMACEUTICALS, INC.  
 2 Cook, William  
 3 Kapeller-Libermann, Rosana  
 4 <120> TITLE OF INVENTION: 14790, NOVEL PROTEIN KINASE MOLECULE AND  
 5 USES TREREFOR  
 6 <130> FILE REFERENCE: 38155-20002.00  
 C--> 7 <140> CURRENT APPLICATION NUMBER: US/09/515,806A  
 8 <141> CURRENT FILING DATE: 2000-02-29  
 9 <160> NUMBER OF SEQ ID NOS: 33  
 10 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 12 <210> SEQ ID NO: 1  
 13 <211> LENGTH: 5525  
 14 <212> TYPE: DNA  
 15 <213> ORGANISM: Homo sapiens  
 16 <220> FEATURE:  
 17 <221> NAME/KEY: CDS  
 18 <222> LOCATION: (63)...(5012)  
 19 <400> SEQUENCE: 1  
 20 tcgccccacg cgtccgcacc gccgcccagg caaggccgccc ctgccttgcc cgccaggcgctg 60  
 21 cc atg gct ggg ggc cgt ggg gcc ccc ggg cgc ggc cgg gac gag cct 107  
 22 Met Ala Gly Gly Arg Gly Ala Pro Gly Arg Gly Arg Asp Glu Pro  
 23 1 5 10 15  
 24 ccg gag agc tac ccg caa cga cag gac cac gag cta cag gcc ctg gag 155  
 25 Pro Glu Ser Tyr Pro Gln Arg Gln Asp His Glu Leu Gln Ala Leu Glu  
 26 20 25 30  
 27 gcc atc tac ggc gcg gac ttc caa gac ctg cgg gac gct tgc gga 203  
 28 Ala Ile Tyr Gly Ala Asp Phe Gln Asp Leu Arg Pro Asp Ala Cys Gly  
 29 35 40 45  
 30 ccg gtc aaa gag ccc cct gaa atc aat tta gtt ttg tac cct caa ggc 251  
 31 Pro Val Lys Glu Pro Pro Glu Ile Asn Leu Val Leu Tyr Pro Gln Gly  
 32 50 55 60  
 33 cta act ggt gaa gaa gta tat gta aaa gtc gat ttg agg gtt aaa tgc 299  
 34 Leu Thr Gly Glu Val Tyr Val Lys Val Asp Leu Arg Val Lys Cys  
 35 65 70 75  
 36 cca cct acc tat cca gat gta gtt cct gaa ata gag tta aaa aat gcc 347  
 37 Pro Pro Thr Tyr Pro Asp Val Val Pro Glu Ile Glu Leu Lys Asn Ala  
 38 80 85 90 95  
 39 aaa ggt cta tca aat gaa agt gtc aat ttg tta aaa tct cgc cta gaa 395  
 40 Lys Gly Leu Ser Asn Glu Ser Val Asn Leu Leu Lys Ser Arg Leu Glu  
 41 100 105 110  
 42 gaa ctg gcc aag aaa cac tgt ggg gag gtc atg atc ttt gaa ctg gct 443  
 43 Glu Leu Ala Lys Lys His Cys Gly Glu Val Met Ile Phe Glu Leu Ala  
 44 115 120 125

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Input Set : N:\CrF4\01242003\I515806A.raw

Output Set: N:\CRF4\01292003\I515806A.raw

45	tac cac gtg cag tca ttt ctc agc gag cat aac aag ccc cct ccc aag	491
46	Tyr His Val Gln Ser Phe Leu Ser Glu His Asn Lys Pro Pro Pro Lys	
47	130 135 140	
48	tct ttt cat gaa gaa atg ctg gaa agg cgg gct cag gag gag cag cag	539
49	Ser Phe His Glu Glu Met Leu Glu Arg Arg Ala Gln Glu Glu Gln Gln	
50	145 150 155	
51	agg ctg ttg gag gcc aag cgg aaa gaa gag cag gag caa cgt gaa atc	587
52	Arg Leu Leu Glu Ala Lys Arg Lys Glu Glu Gln Glu Gln Arg Glu Ile	
53	160 165 170 175	
54	ctg cat gag att cag aga agg aaa gaa gag ata aaa gaa gag aaa aaa	635
55	Leu His Glu Ile Gln Arg Arg Lys Glu Glu Ile Lys Glu Glu Lys Lys	
56	180 185 190	
57	agg aaa gaa atg gct aag cag gaa cgt ttg gaa att gct agt ttg tca	683
58	Arg Lys Glu Met Ala Lys Gln Glu Arg Leu Glu Ile Ala Ser Leu Ser	
59	195 200 205	
60	aac caa gat cat acc tct aag aag gac cca gga gga cac aga acg gct	731
61	Asn Gln Asp His Thr Ser Lys Lys Asp Pro Gly Gly His Arg Thr Ala	
62	210 215 220	
63	gcc att cta cat gga ggc tct cct gac ttt gta gga aat ggt aaa cat	779
64	Ala Ile Leu His Gly Gly Ser Pro Asp Phe Val Gly Asn Gly Lys His	
65	225 230 235	
66	cgg gca aac tcc tca gga agg tct agg cga gaa cgt cag tat tct gta	827
67	Arg Ala Asn Ser Ser Gly Arg Ser Arg Arg Glu Arg Gln Tyr Ser Val	
68	240 245 250 255	
69	tgt aat agt gaa gat tct cct ggc tct tgt gaa att ctg tat ttc aat	875
70	Cys Asn Ser Glu Asp Ser Pro Gly Ser Cys Glu Ile Leu Tyr Phe Asn	
71	260 265 270	
72	atg ggg agt cct gat cag ctc atg gtg cac aaa ggg aaa tgt att ggc	923
73	Met Gly Ser Pro Asp Gln Leu Met Val His Lys Gly Lys Cys Ile Gly	
74	275 280 285	
75	agt gat gaa caa ctt gga aaa tta gtc tac aat gct ttg gaa aca gca ggc	971
76	Ser Asp Glu Gln Leu Gly Lys Leu Val Tyr Asn Ala Leu Glu Thr Ala	
77	290 295 300	
78	act ggt ggc ttt gtc ttg tat gag tgg gtc ctt cag tgg cag aaa	1019
79	Thr Gly Gly Phe Val Leu Leu Tyr Glu Trp Val Leu Gln Trp Gln Lys	
80	305 310 315	
81	aaa atg ggt cca ttc ctt acc agt caa gaa aaa gag aag att gat aag	1067
82	Lys Met Gly Pro Phe Leu Thr Ser Gln Glu Lys Glu Lys Ile Asp Lys	
83	320 325 330 335	
84	tgc aaa aag cag att caa gga aca gaa aca gaa ttc aac tca ctg gta	1115
85	Cys Lys Lys Gln Ile Gln Gly Thr Glu Thr Glu Phe Asn Ser Leu Val	
86	340 345 350	
87	aaa ttg agc cat cca aat gta gta cgc tac ctt gca atg aat ctc aaa	1163
88	Lys Leu Ser His Pro Asn Val Val Arg Tyr Leu Ala Met Asn Leu Lys	
89	355 360 365	
90	gag caa gac gac tcc atc gtg gtg gac att tta gtg gag cac att agt	1211
91	Glu Gln Asp Asp Ser Ile Val Val Asp Ile Leu Val Glu His Ile Ser	
92	370 375 380	
93	ggg gtc tct ctt gct gca cac ctg agc cac tca ggc ccc atc cct gtg	1259

RAW SEQUENCE LISTING  
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Input Set : N:\Crf4\01242003\I515806A.raw  
Output Set: N:\CRF4\01292003\I515806A.raw

94	Gly Val Ser Leu Ala Ala His Leu Ser His Ser Gly Pro Ile Pro Val		
95	385 390 395		
96	cat cag ctt cgc agg tac aca gct cag ctc ctg tca ggc ctt gat tat	1307	
97	His Gln Leu Arg Arg Tyr Thr Ala Gln Leu Leu Ser Gly Leu Asp Tyr		
98	400 405 410 415		
99	ctg cac agc aat tct gtg gtg cat aag gtc ctg agt gca tct aat gtc	1355	
100	Leu His Ser Asn Ser Val Val His Lys Val Leu Ser Ala Ser Asn Val		
101	420 425 430		
102	ttg gtg gat gca gaa ggc acc gtc aag att acg gac tat agc att tct	1403	
103	Leu Val Asp Ala Glu Gly Thr Val Lys Ile Thr Asp Tyr Ser Ile Ser		
104	435 440 445		
105	aag cgc ctc gca gac att tgc aag gag gat gtg ttt gag caa acc cga	1451	
106	Lys Arg Leu Ala Asp Ile Cys Lys Glu Asp Val Phe Glu Gln Thr Arg		
107	450 455 460		
108	gtt cgt ttt agt gac aat gct ctg cct tat aaa acg ggg aag aaa gga	1499	
109	Val Arg Phe Ser Asp Asn Ala Leu Pro Tyr Lys Thr Gly Lys Lys Gly		
110	465 470 475		
111	gat gtt tgg cgt ctt ggc ctt ctg ctg tcc ctc agc caa gga cag	1547	
112	Asp Val Trp Arg Leu Gly Leu Leu Leu Ser Leu Ser Gln Gly Gln		
113	480 485 490 495		
114	gaa tgt gga gag tac cct gtg acc atc cct agt gac tta cca gct gac	1595	
115	Glu Cys Gly Glu Tyr Pro Val Thr Ile Pro Ser Asp Leu Pro Ala Asp		
116	500 505 510		
117	ttt caa gat ttt cta aag aaa tgt gtg tgc ttg gat gac aag gaa aga	1643	
118	Phe Gln Asp Phe Leu Lys Lys Cys Val Cys Leu Asp Asp Lys Glu Arg		
119	515 520 525		
120	tgg agt ccc cag cag ttg ttg aaa cac agc ttt ata aat ccc cag cca	1691	
121	Trp Ser Pro Gln Gln Leu Leu Lys His Ser Phe Ile Asn Pro Gln Pro		
122	530 535 540		
123	aaa atg cct cta gtg gaa caa agt cct gaa gat tct gga gga caa gat	1739	
124	Lys Met Pro Leu Val Glu Gln Ser Pro Glu Asp Ser Gly Gly Gln Asp		
125	545 550 555		
126	tat gtt gag act gtt att cct agc aac cgg cta ccc agt gct gcc ttc	1787	
127	Tyr Val Glu Thr Val Ile Pro Ser Asn Arg Leu Pro Ser Ala Ala Phe		
128	560 565 570 575		
129	ttt agt gag aca cag aga cag ttt tcc cga tac ttc att gag ttt gaa	1835	
130	Phe Ser Glu Thr Gln Arg Gln Phe Ser Arg Tyr Phe Ile Glu Phe Glu		
131	580 585 590		
132	gaa tta caa ctt ctt ggt aaa gga gct ttt gga gct gtc atc aag gtg	1883	
133	Glu Leu Gln Leu Leu Gly Lys Gly Ala Phe Gly Ala Val Ile Lys Val		
134	595 600 605		
135	cag aac aag ttg gac ggc tgc tgc tac gca gtg aag cgc atc ccc atc	1931	
136	Gln Asn Lys Leu Asp Gly Cys Cys Tyr Ala Val Lys Arg Ile Pro Ile		
137	610 615 620		
138	aac ccg gcc agc cgg cag ttc cgc agg atc aag ggc gaa gtg aca ctg	1979	
139	Asn Pro Ala Ser Arg Gln Phe Arg Arg Ile Lys Gly Glu Val Thr Leu		
140	625 630 635		
141	ctg tca cgg ctg cac cat gag aac att gtg cgc tac tac aac gcc tgg	2027	
142	Leu Ser Arg Leu His His Glu Asn Ile Val Arg Tyr Tyr Asn Ala Trp		

## RAW SEQUENCE LISTING

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Input Set : N:\CrF4\01242003\I515806A.raw

Output Set: N:\CRF4\01292003\I515806A.raw

143	640	645	650	655	
144	atc	gag	cg	cc	2075
145	Ile	Glu	Arg	His	
146	660	665	670		
147	tcc	ggg	ccc	ctg	2123
148	Ser	Gly	Pro	Gly	
149	675	680	685		
150	agc	gac	aca	gac	2171
151	Ser	Asp	Thr	Asp	
152	690	695	700		
153	atc	ctc	agc	agc	2219
154	Ile	Leu	Ser	Ser	
155	705	710	715		
156	agt	gcc	cgt	tcc	2267
157	Ser	Ala	Arg	Phe	
158	720	725	730	735	
159	gac	gac	gac	gac	2315
160	Asp	Asp	Glu	Asp	
161	740	745	750		
162	gct	tca	gat	tct	2363
163	Ala	Ser	Asp	Ser	
164	755	760	765		
165	agt	aaa	agt	cag	2411
166	Ser	Lys	Ser	Gln	
167	770	775	780		
168	cat	gaa	agt	gag	2459
169	His	Glu	Ser	Glu	
170	785	790	795		
171	atc	cag	atg	gag	2507
172	Ile	Gln	Met	Glu	
173	800	805	810	815	
174	cag	gga	ctg	tat	2555
175	Gln	Gly	Leu	Tyr	
176	820	825	830		
177	att	ctg	gat	gga	2603
178	Ile	Leu	Asp	Gly	
179	835	840	845		
180	gat	ttg	aag	cct	2651
181	Asp	Leu	Lys	Pro	
182	850	855	860		
183	ata	ggt	gat	ttt	2699
184	Ile	Gly	Asp	Phe	
185	865	870	875		
186	agc	aaa	caa	gac	2747
187	Ser	Lys	Gln	Asp	
188	880	885	890	895	
189	ggt	cac	tta	act	2795
190	Gly	His	Leu	Thr	
191	900	905	910		

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/515,806A

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TIME: 08:33:45

Input Set : N:\CrF4\01242003\I515806A.raw  
Output Set: N:\CRF4\01292003\I515806A.raw

192	gtc caa gga agc acc aaa tct gca tac aac cag aaa gtg gat ctc ttc	2843
193	Val Gln Gly Ser Thr Lys Ser Ala Tyr Asn Gln Lys Val Asp Leu Phe	
194	915 920 925	
195	agc ctg gga att atc ttc ttt gag atg tcc tat cac ccc atg gtc acg	2891
196	Ser Leu Gly Ile Ile Phe Phe Glu Met Ser Tyr His Pro Met Val Thr	
197	930 935 940	
198	gct tca gaa agg atc ttt gtt ctc aac caa ctc aga gat ccc act tcg	2939
199	Ala Ser Glu Arg Ile Phe Val Leu Asn Gln Leu Arg Asp Pro Thr Ser	
200	945 950 955	
201	cct aag ttt cca gaa gac ttt gac gat gga gag cat gca aag cag aaa	2987
202	Pro Lys Phe Pro Glu Asp Phe Asp Asp Gly Glu His Ala Lys Gln Lys	
203	960 965 970 975	
204	tca gtc atc tcc tgg ctg ttg aac cac gat cca gca aaa cgg ccc aca	3035
205	Ser Val Ile Ser Trp Leu Leu Asn His Asp Pro Ala Lys Arg Pro Thr	
206	980 985 990	
207	gcc aca gaa ctg ctc aag agt gag ctg ctg ccc cca ccc cag atg gag	3083
208	Ala Thr Glu Leu Leu Lys Ser Glu Leu Leu Pro Pro Pro Gln Met Glu	
209	995 1000 1005	
210	gag tca gag ctg cat gaa gtg ctg cac cac acg ctg acc aac gtg gat	3131
211	Glu Ser Glu Leu His Glu Val Leu His His Thr Leu Thr Asn Val Asp	
212	1010 1015 1020	
213	ggg aag gcc tac cgc acc atg atg gcc cag atc ttc tcg cag cgc atc	3179
214	Gly Lys Ala Tyr Arg Thr Met Met Ala Gln Ile Phe Ser Gln Arg Ile	
215	1025 1030 1035	
216	tcc cct gcc atc gat tac acc tat gac agc gac ata ctg aag ggc aac	3227
217	Ser Pro Ala Ile Asp Tyr Thr Tyr Asp Ser Asp Ile Leu Lys Gly Asn	
218	1040 1045 1050 1055	
219	ttc tca atc cgt aca gcc aag atg cag cag cat gtg tgt gaa acc atc	3275
220	Phe Ser Ile Arg Thr Ala Lys Met Gln Gln His Val Cys Glu Thr Ile	
221	1060 1065 1070	
222	atc cgc atc ttt aaa aga cat gga gct gtt cag ttg tgt act cca cta	3323
223	Ile Arg Ile Phe Lys Arg His Gly Ala Val Gln Leu Cys Thr Pro Leu	
224	1075 1080 1085	
225	ctg ctt ccc cga aac aga caa ata tat gag cac aac gaa gct gcc cta	3371
226	Leu Leu Pro Arg Asn Arg Gln Ile Tyr Glu His Asn Glu Ala Ala Leu	
227	1090 1095 1100	
228	ttc atg gac cac agc ggg atg ctg gtg atg ctt cct ttt gac ctg cgg	3419
229	Phe Met Asp His Ser Gly Met Leu Val Met Leu Pro Phe Asp Leu Arg	
230	1105 1110 1115	
231	atc cct ttt gca aga tat gtg gca aga aat aat ata ttg aat tta aaa	3467
232	Ile Pro Phe Ala Arg Tyr Val Ala Arg Asn Asn Ile Leu Asn Leu Lys	
233	1120 1125 1130 1135	
234	cga tac tgc ata gaa cgt gtg ttc agg ccg cgc aag tta gat cga ttt	3515
235	Arg Tyr Cys Ile Glu Arg Val Phe Arg Pro Arg Lys Leu Asp Arg Phe	
236	1140 1145 1150	
237	cat ccc aaa gaa ctt ctg gag tgt gca ttt gat att gtc act tct acc	3563
238	His Pro Lys Glu Leu Leu Glu Cys Ala Phe Asp Ile Val Thr Ser Thr	
239	1155 1160 1165	
240	acc aac agc ttt ctg ccc act gct gaa att atc tac act atc tat gaa	3611

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/515,806A

DATE: 01/29/2003  
TIME: 08:33:46

Input Set : N:\Crf4\01242003\I515806A.raw  
Output Set: N:\CRF4\01292003\I515806A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:6; Xaa Pos. 1,2,3,4,5,6,7,8,9,11,13,14,15,16,18,19,20,21,22,23,24,25  
Seq#:6; Xaa Pos. 26,27,28,29,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45  
Seq#:6; Xaa Pos. 46,47,48,49,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65  
Seq#:6; Xaa Pos. 66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84  
Seq#:6; Xaa Pos. 85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102  
Seq#:6; Xaa Pos. 103,104,105,106,107,108,109,110,111,112,113,114,115,116  
Seq#:6; Xaa Pos. 118,119,120,121,122,123,124,125,129,131,132,134,135,136  
Seq#:6; Xaa Pos. 137,138,139,140,141,142,143,144,145,146,147,148,149,150  
Seq#:6; Xaa Pos. 152,153,157,158,159,160,161,162,163,164,165,166,167,168  
Seq#:6; Xaa Pos. 169,170,171,172,173,174,175,176,177,179,180,181,182,183  
Seq#:6; Xaa Pos. 184,185,186,187,188,189,190,191,193,194,195,197,198,199  
Seq#:6; Xaa Pos. 200,201,202,203,204,205,206,207,208,209,210,211,212,213  
Seq#:6; Xaa Pos. 214,215,216,217,218,219,220,221,222,223,224,225,226,227  
Seq#:6; Xaa Pos. 228,229,230,231,232,233,234,235,236,237,238,239,240,241  
Seq#:6; Xaa Pos. 242,243,244,245,246,247,248,249,250,251,253,254,255,256  
Seq#:6; Xaa Pos. 257,258,259,260,261,262,263,264,265,266,268,269,270  
Seq#:7; Xaa Pos. 2,4,5,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24  
Seq#:7; Xaa Pos. 25,26,27,28,29